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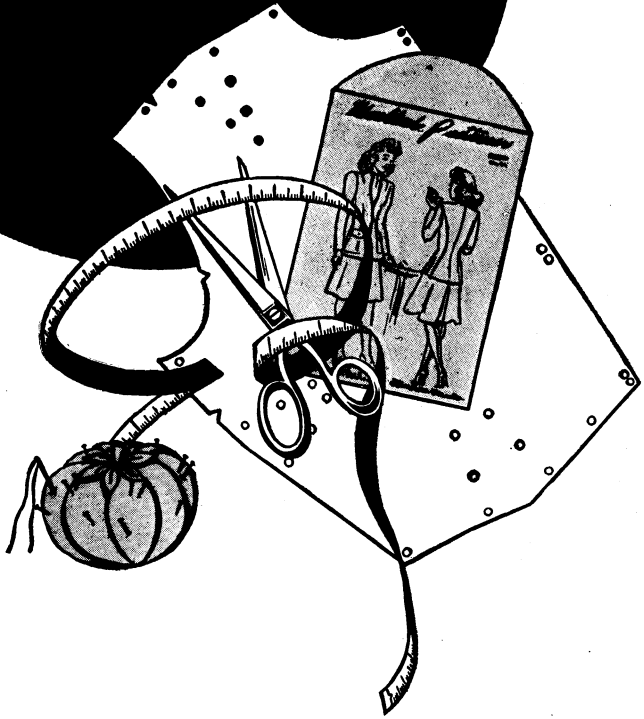
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PATTERN *Alteration*



Farmers'
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No. 1968

U. S. DEPARTMENT OF AGRICULTURE

PATTERN ALTERATION

by

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To make attractive, durable, well-fitting clothes is the aim of every woman who sews for herself or her family. Poorly fitting garments are a waste of time and materials—they are uncomfortable and often do not withstand hard wear. The first step toward making a well-fitting dress is a pattern that fits properly. If you are careful to choose a style and the size best suited to your figure, you may not have to make any alterations in your pattern. But most women have some figure irregularity which requires that some change be made, either in the pattern or the dress, for a perfect fit.



Figure 1

The three forms shown in figure 1, for instance, take the same size pattern; yet for each, entirely different alterations must be made to take care of individual problems. The tall figure needs extra length in the waist, skirt, and sleeves. The length is right for the middle figure but the skirt will have to be enlarged through the hips. For the third figure the pattern will have to be shortened and the hips widened.

The best way to make changes is to alter the pattern, since it is impossible to make some alterations as well once the dress is cut and basted together. This bulletin deals with the problems of altering a pattern—how to measure the figure and take corresponding pattern measurements, and how to alter the pattern pieces to correspond to your measurements.

KNOW YOUR MEASUREMENTS

Before you buy a pattern, you need to know your bust, waist, and hip measurements. Then before you cut out the dress, you need a complete set of your measurements to compare with those of the pattern. Some measurements you can take yourself; you'll need help in taking others.

When you are having your measurements taken, wear your usual type of foundation garment and comfortable shoes with heels the height you ordinarily wear. Stand erect, but keep your normal posture.

If you have a dress that fits well, wear it when you are being measured—to locate armholes, neck line, shoulder seams, side seams. The dress should have set-in sleeves, with the shoulder width and armhole line that are in fashion (fig. 2). For instance, wear a dress with padded shoulders if they are fashionable, so you will include the thickness of the pad when you measure the length of the sleeve cap. Wear a smoothly fitted skirt with a normal waistline. Take off the belt if there is one, and tie a cord around your waist instead.

If you haven't a well-fitting dress, it is better to take the measurements over your slip. Before you take any measurements, locate the neck base, armholes, shoulder seams, side seams, and waistline.

Put a close-fitting chain or cord around your neck to locate the neck line.

Tie a cord around each arm as a guide for marking the **armhole seams**. Study fashion magazines to see where the top of the armhole should be. Some seasons the normal armhole may be fashionable; in other years the shoulder may be extended and the armhole seam may come almost to the outer edge of the arm, or the armhole may be high and the shoulder very narrow. (See fig. 2, *A* and *B*.) Have someone mark with a thin chalk line the top, front, back, and bottom of the armhole, following the cord (fig. 2, *C*). Mark the bottom of the armhole at a comfortable depth under the arm—usually about 1 to 2 inches below the armpit.

For the **shoulder seam**, draw a straight line with chalk or soft pencil from the bone at the top of the arm along the highest point of the shoulder muscle, to the neck line.

Mark the **underarm seam** with a row of pins or a tape, about $\frac{1}{2}$ inch back of the middle of the armhole, in line with the shoulder seam, but placed so the line will be hidden when the arm hangs straight at the sides.

Tie a cord around your waist to mark the **waistline**.

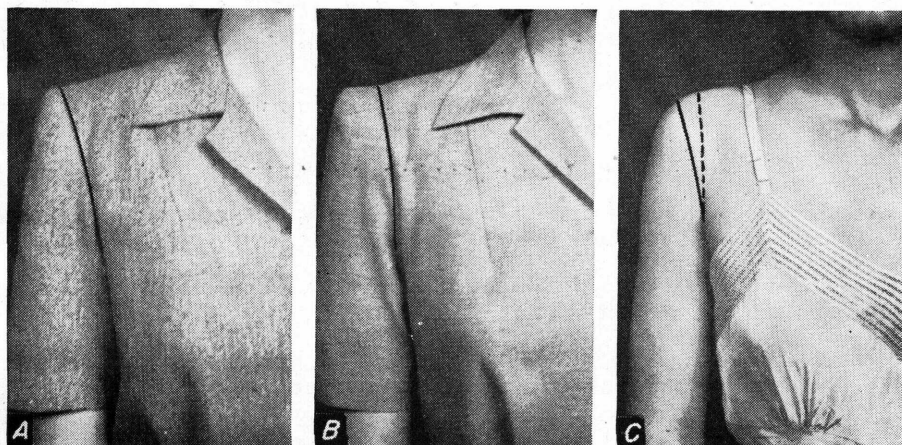


Figure 2

Measurements Needed to Check the Pattern

Some measurements require a mark to locate a particular point, as when you measure the chest and width across shoulder blades. If you're wearing a dress, mark such a point with a pin—if not, mark it lightly on your skin with soft pencil or chalk.

Take all measurements snugly but not tight, and use a tape measure that doesn't stretch.

Record the measurements as they are taken. You can write down both your own measurements and the pattern measurements on page 11 and keep them handy for ready reference.

Figure 3 shows the position of the measurements you will need.

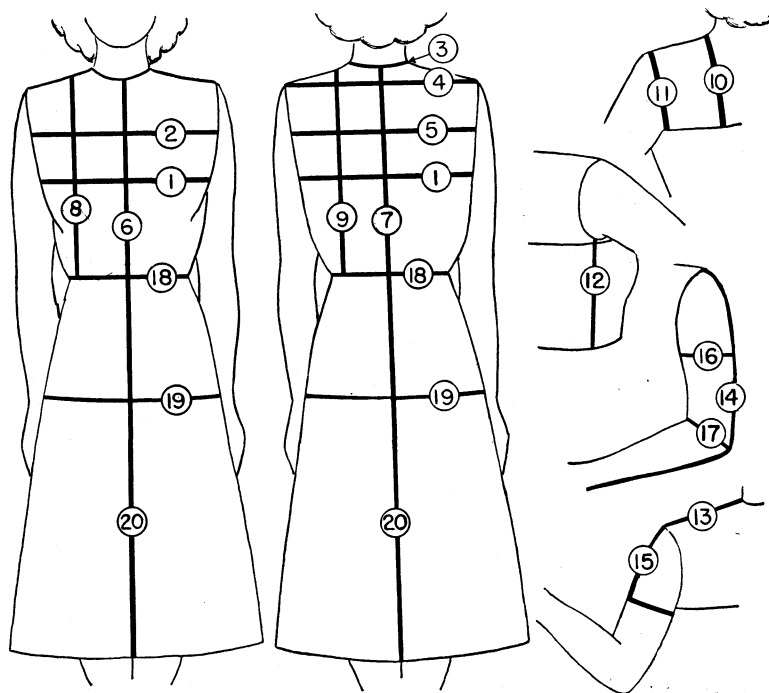


Figure 3

1. **Bust.**—Measure fullest part of bust, keeping the tape parallel to the floor. Measure both front and back between side seams.
2. **Chest width.**—At a point 6 inches down from the shoulder seam at the neck line, measure from armhole seam to armhole seam.
3. **Back neck seam.**—Measure along the back neck line, from shoulder seam to shoulder seam. Stand tape on edge to measure a good curve.

4. *Upper back width.*—Measure straight across the back from top of one armhole seam to the other.
5. *Width across shoulder blades.*—At a point 7 inches down from the shoulder seam at the neck line, measure from armhole seam to armhole seam.
6. *Blouse length, center front.*—Measure from the base of neck straight down to the waistline.
7. *Blouse length, center back.*—Measure from the collarbone at back of neck to waistline.
8. *Blouse length, over bust.*—Measure from the middle of the shoulder seam, over the bust, straight down to the waistline. Keep the tape parallel to center front.
9. *Blouse length, over shoulder blades.*—Measure from the middle of shoulder seam, over shoulder blades, to the waistline. Keep tape parallel to center back.
10. *Armhole depth.*—Tie a cord around your chest, level with the bottom of the armhole. Measure from the shoulder seam at neck line straight down to this cord. If one shoulder is higher than the other, measure the high one.
11. *Shoulder height.*—Measure from the shoulder seam at top of armhole, down the back to the cord tied around your chest.
12. *Underarm length.*—From the cord tied around your chest, measure from the armhole down to waistline. Or measure the underarm seam length if you are wearing a dress.
13. *Shoulder length.*—Measure from the base of neck to top of armhole line.
14. *Sleeve length.*—Measure from top of the armhole, down over the elbow with arm bent, to the wristbone. Also measure distance from elbow to wristbone.
15. *Sleeve-cap length.*—Tie a cord around your arm, level with the bottom of the armhole. Measure from top of the armhole seam to this cord.
16. *Upper arm (or sleeve width).*—Measure around fullest part of upper arm. This is usually at bottom of armhole. Also record distance of this measurement from the top of the armhole seam.
17. *Elbow.*—Measure around elbow, with arm bent.
18. *Waistline.*—Measure snugly where you want the belt to be. Take both front and back measurements between side seams.
19. *Hips.*—Measure at widest part of hips, keeping tape parallel to the floor. Look at your figure from both front and sides to see whether your hips are larger at the hip or the thigh level. If in doubt, take both measurements and use the larger one. Record distance of this measurement from the waistline. Usually it is between 6 and 10 inches below the waist.
20. *Skirt length.*—Measure from the waistline to bottom of the skirt or desired distance from the floor—at center front, center back, and sides.

BUY THE RIGHT SIZE PATTERN

Most patterns are sold by bust measure. If you have no figure irregularities, a pattern in the right bust size should fit you fairly well. But be sure to get the size that corresponds to your own measurement. Don't buy a size or two larger to allow for fullness. This has been taken care of in the pattern and a larger one would be too big all over.

However, patterns vary a great deal—those from one company may have shoulders a little narrower than the others, or deeper armholes, or a longer waist. You may find that one kind of pattern fits you better than any other and requires less fitting. If so, buy that kind whenever you can.

Perhaps you have had trouble with the fit of your patterns and are not sure what size is best for you. If so, study the scale of measurements in the large counter pattern book to see which size pattern is nearest to your own measurements. This scale gives waist and hip measurements for each bust size. If your bust and waist measures are the same as those for a pattern size but your hips are larger, buy a pattern in the bust size and enlarge the skirt. However, if the skirt is in many pieces (and the pattern is an inexpensive one), it may save you time and trouble to buy a second pattern to fit your hips.

Perhaps your bust and hip measurements agree with a pattern size, but your shoulders and chest are narrow in proportion. If you cannot find a pattern styled with narrow shoulders, buy one a size or two smaller than the bust. It is easier to enlarge the bust and hips than to narrow the chest and shoulders enough to fit properly. A style with tucks or soft fullness below the shoulders is easy to alter in the shoulders and chest. Plain tailored fronts with a single shoulder dart are harder to alter, and, if fitted well, call attention to these figure irregularities.

Before you use any pattern, it is best to try it out in muslin or some old cloth on hand and make any necessary alterations. If this is not possible, be sure to check the pattern measurements carefully with your own and alter the pattern, if necessary, before cutting out a dress.

MEASURE THE PATTERN PIECES

When you are ready to measure your pattern, press the blouse pattern, front and back, the skirt pieces, and the sleeve so they will lie flat. If there are marks for darts, tucks, or pleats, pin them in and measure over them. Measure between seam perforations. Most measurements are taken parallel or at right angles to the straight-of-goods marks on the pattern. A few are taken on a curve. (See fig. 4.)

Remember that for most pattern pieces you are measuring just half the pattern. For example, you measure just half the blouse front and half the blouse back. So twice the front pattern measurement should correspond to your own bust measure across the front, plus allowance for ease.

Allowance for ease.—The amount of fullness needed for ease depends on the kind of material and style of the dress—thin, sheer fabrics need more fullness than heavy tailored ones; soft, dressy styles more than straight slim types. Patterns allow a certain amount for ease in some of the measurements, but it may not be as much as you need for comfort. You can measure a comfortably fitting dress and compare these measurements with your own to see how much has been allowed. You can then add this amount to your own measurement and adjust the pattern if necessary.

Most patterns allow the following amounts for ease:

4 inches through the bust—2 inches or more across the front and about 2 inches in back.

About $\frac{1}{2}$ inch in the chest width.

From $\frac{1}{2}$ to 1 inch in back width across the shoulder blades.

At least $\frac{1}{2}$ inch in all blouse length measurements.

About 2 inches at hips for a plain skirt—1 inch in front, 1 inch in back. Some fullness can be fitted out later if there is too much.

$\frac{1}{2}$ to $\frac{3}{4}$ inch in sleeve-cap length to allow for shoulder pads, if the pattern calls for them.

3 to 4 inches in sleeve width at bottom of the armhole.

At least 1 inch at the elbow in a fitted sleeve.

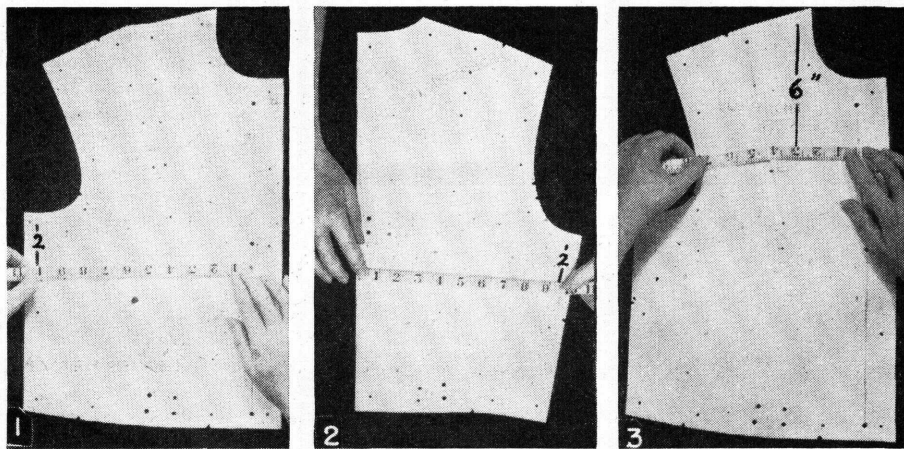
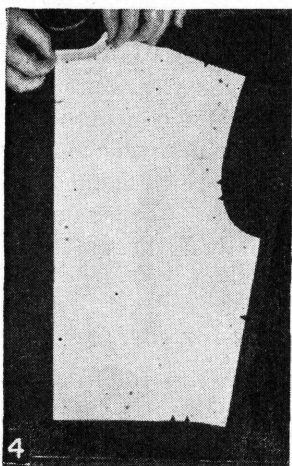


Figure 4.

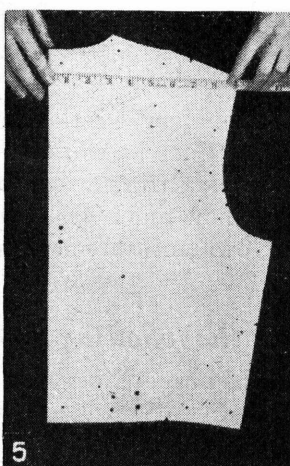
1. *Bust front.*—Measure between center front and side-seam perforations, 2 inches below armhole seam line.

2. *Bust back.*—Measure between center back and side-seam perforations, 2 inches below armhole seam line.

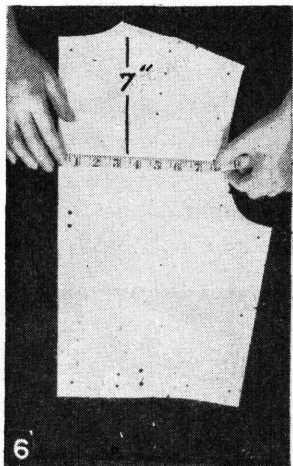
3. *Chest width.*—Measure from armhole seam line to center front, 6 inches below shoulder seam at neck line.



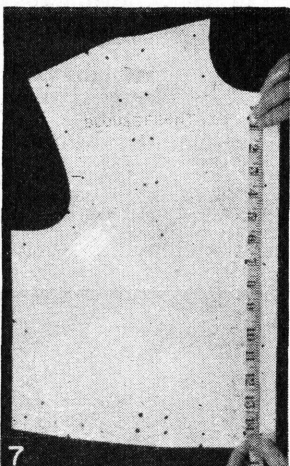
4. Back neck seam.—Measure along neck seam line, using edge of tape for a good curve.



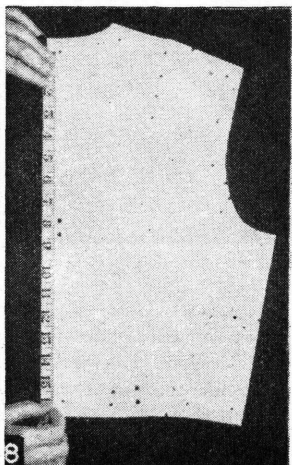
5. Upper back width.—Measure from center back straight across to top of armhole seam line.



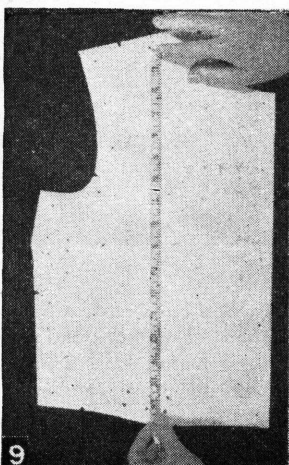
6. Width across shoulder blades.—Measure from center back to armhole seam line, 7 inches below shoulder seam at neck line.



7. Blouse length, center front.—Measure from neck seam line to waistline, along center-front perforations.



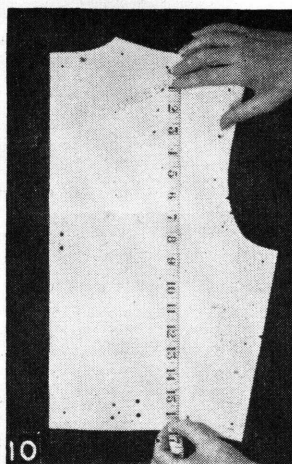
8. Blouse length, center back.—Measure from neck seam line to waistline along center back.



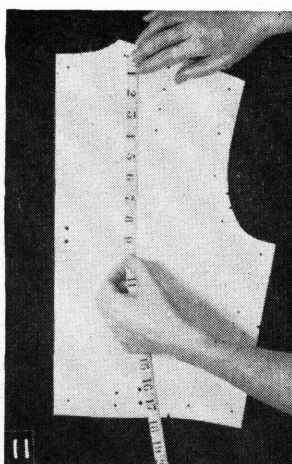
9. Blouse length, over bust.—Measure from middle of shoulder seam line straight down to waistline.

Figure 4—Continued

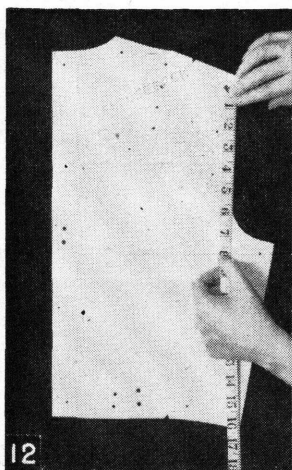
10. Blouse length, over shoulder blades.—Measure from middle of shoulder seam line to waistline.



11. Armhole depth.—Measure on blouse back from shoulder seam line at neck to bottom of armhole seam line.



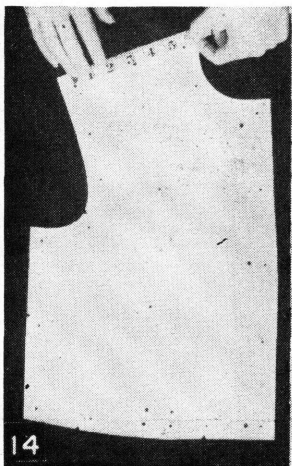
12. Shoulder height.—Measure on blouse back from top to bottom of armhole seam line.



13. Underarm length.—Measure on blouse back from armhole seam line to waistline.



14. Shoulder length.—Measure a plain or darted front between seam perforations. If front is gathered, measure back shoulder line.



15. Sleeve length.—Measure from top-of-shoulder perforations to bottom of hem or seam line, following straight-of-goods perforations.

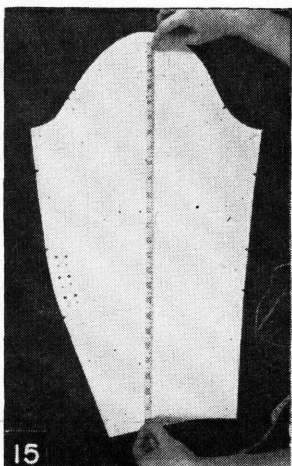
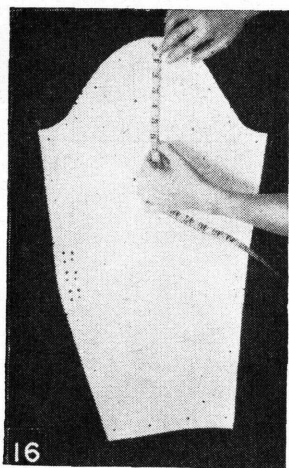
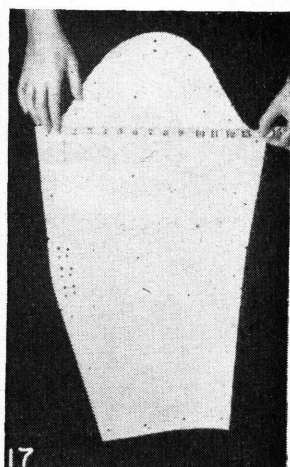


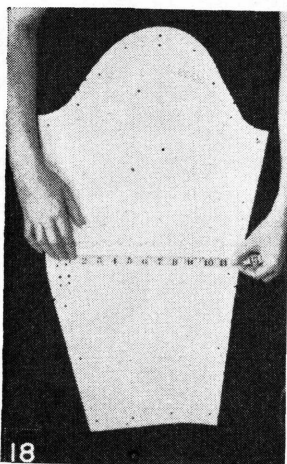
Figure 4—Continued



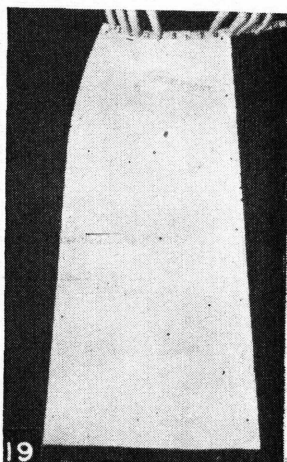
16. Sleeve - cap length.—Measure from top-of-shoulder perforations straight down to bottom of armhole seam.



17. Sleeve width.—Measure between underarm seam lines of sleeve at same distance from top of armhole as upper arm measurement was taken (fig. 3, p. 4).

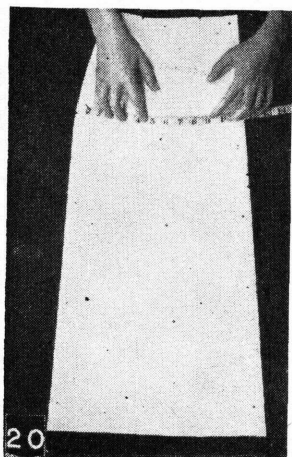


18. Elbow.—Measure from middle of elbow fullness to a point halfway between matching notches on opposite seam line.

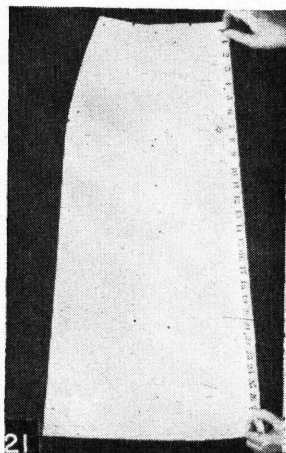


19. Waistline.—Measure waistline of plain skirt, following waist curve and seam perforations. Take front and back measurements.

If skirt is gathered, measure the belt pattern from center-front and center-back perforations to side-seam perforations.



20. Hips.—Measure pattern at exactly the same distance from waistline that your own hip measurement was taken. Measure in a curved line, an even distance from the waistline.



21. Skirt length.—Measure from waistline to hem perforations—at center front, center back, and sides.

Figure 4—Continued

DOES THE PATTERN NEED TO BE ALTERED?

For ease in comparing your own measurements with those of the pattern, you can write them down as you take them, in the spaces provided below. Remember to double measurements such as chest width and back width where you have measured just half the pattern, so you can compare them with your own measurements.

Item	Your own measurement	Usual allowance for ease	Pattern measurement
	Inches	Inches	Inches
Bust:			
Front	_____	2	_____
Back	_____	2	_____
Chest width	_____	$\frac{1}{4}$ to $\frac{1}{2}$	_____
Back neck seam	_____	_____	_____
Upper back width	_____	$\frac{1}{2}$	_____
Width across shoulder blades	_____	$\frac{1}{2}$ to 1	_____
Blouse length:			
Center front	_____	$\frac{1}{2}$	_____
Center back	_____	$\frac{1}{2}$	_____
Over bust	_____	$\frac{1}{2}$	_____
Over shoulder blades	_____	$\frac{1}{2}$	_____
Armhole depth	_____	_____	_____
Shoulder height	_____	_____	_____
Underarm length (or underarm seam)	_____	_____	_____
Shoulder length	_____	_____	_____
Sleeve length:			
Shoulder to wrist	_____	_____	_____
Elbow to wrist	_____	_____	_____
Sleeve-cap length	_____	(See p. 7)	_____
Upper arm (or sleeve width)	_____	3 to 4	_____
Elbow	_____	1	_____
Waistline:			
Front	_____	_____	_____
Back	_____	_____	_____
Hips:			
Front	_____	1	_____
Back	_____	1	_____
Waistline to hips	_____	_____	_____
Skirt length:			
Center front	_____	_____	_____
Center back	_____	_____	_____
Left side	_____	_____	_____
Right side	_____	_____	_____

If your own measurement plus allowance for ease differs but slightly from the pattern measurement—perhaps a small fraction of an inch—it is probably safe to use the pattern as it is. If necessary, you can make minor adjustments in the fit after the dress is basted together. Otherwise, it is easier and results are more accurate if you alter the pattern to agree as closely as possible with your own measurements before you cut out the dress.

HOW TO ALTER PATTERNS

Basic directions for altering patterns are given below. Illustrated directions for solving general fitting problems by altering the pattern appear on following pages.

When you have decided where the pattern needs to be altered, draw a straight line as a guide for cutting the pattern. For most alterations, make the line parallel or at right angles to the straight-of-goods perforations. Cut along this line far enough into the pattern so it will spread out flat or so one piece can be lapped over the other without forming a pouch at the end of the slash. The pieces will still be joined at one edge. If you are lengthening or shortening an entire pattern piece, however, you will need to cut the pattern all the way across. In that case, before cutting, draw two short lines a few inches apart, at right angles to and across the cutting line. (See fig. 5.) Then match these lines when you spread or lap the pattern, to keep the pieces in the correct position.

Spread or lap cut edges to make the pattern larger or smaller, as needed. When you spread the sections apart, lay a strip of paper underneath the cut edges. Check the altered pattern measurements to be sure they agree with your own, then paste, pin, or use gummed tape to fasten the pattern pieces in place. If the pattern shrivels at pasted edges, press it flat before you use it.

Sometimes more than one change is needed in a pattern piece. For example, you may want to lengthen the blouse front and widen the bust. The best way is to take care of each alteration separately, that is, lengthen the blouse first, then widen the bust.

Be very careful to make alterations in a pattern only where needed. For instance, if your pattern is too small in the bust, but fits in the chest and shoulders, take care to widen only the bust. Try not to change the shape of the armholes, neck line, or shoulders any more than necessary.

If the alteration is a difficult one, you may wish to try it out on a duplicate of your pattern made from newspaper or wrapping paper. Mark all perforations and notches on the duplicate, and make the necessary corrections on it. It is a good idea to try out the altered pattern in muslin or old cloth to be sure of the fit. Then alter the original pattern the same way, so it will be ready to use when you need it.

A Basic Pattern Saves Time in Altering

If you usually have to make many changes in your patterns, a well-fitting basic pattern can be a great help as a guide in altering all your patterns. It saves taking so many measurements on each pattern you use.

For your basic pattern, select a simple shirtwaist style with a plain skirt—a six-gored one is easy to make and fit; and make it up in muslin or other inexpensive cloth. Alter the muslin model until it feels and looks just right on you—slash or take tucks or pleats wherever needed. Then rip the dress apart at the seams, press, and make the same changes in your paper pattern. Or make a new pattern, using the muslin garment as a guide. Mark all notches and perforations on the new pattern just as they are in the altered muslin garment. You can use this pattern to check the lines and proportions of other patterns as you use them. You can compare shoulder length, bust fullness, waist length, width across back and chest, depth of armhole, length of sleeve cap, as well as skirt length and flare. Be sure to make a new basic pattern each year, using an up-to-date pattern, so you will have the shoulder, armhole, and waistline that are in fashion.

In the sketches showing how to alter the pattern—

Broken lines inside the pattern mark **cutting lines**.

White areas within the pattern show where the pattern has been **enlarged**.

Broken lines outside the altered pattern outline the parts to be **trimmed off**.

Solid lines outline the **altered pattern**.

Pattern too Short or too Long

On each pattern piece that needs to be shortened or lengthened, draw a line at right angles to the perforations that mark the straight of the goods. On the blouse this line should be just below the bust; On the skirt, just below the hip line; on the sleeve, above and below the elbow. Cut along these lines. If the pattern is too short, spread the cut edges

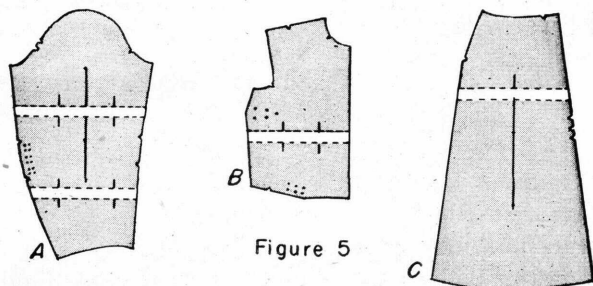


Figure 5

apart until each pattern piece is the length you need (fig. 5). Be sure to add the same amount to the blouse back or skirt back that you add to the corresponding front pieces.

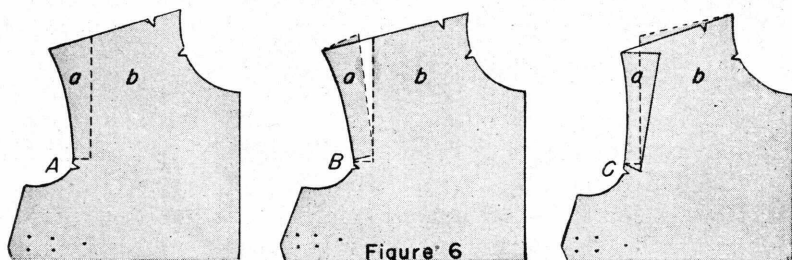
If the pattern is too long, lap the pieces to shorten them the needed amount. Alter all other pieces, such as front facings, that will be affected by these changes.

Shoulders of Pattern too Wide or too Narrow

When you change the shoulders of the pattern be careful not to make them too narrow. If padded shoulders are in fashion, you can extend the shoulder seams on your dress to the outer edge of your arms and hold the shoulders up with pads. Wide shoulders make the hips look smaller and generally are more becoming than narrow shoulders.

To alter the shoulder width, draw a line from the shoulder seam, about 3 inches in from the armhole, straight down to about $1\frac{1}{2}$ inches above the level of the bottom of the armhole, then straight over to the armhole edge (fig. 6, A). Cut along these lines almost to the armhole edge. Cutting as far down the armhole as this helps to keep its original shape. To widen the shoulder, spread section *a* away from *b* (fig. 6, B). To narrow the shoulder, lap section *a* over *b* (fig. 6, C). Make a new shoulder line, from the neck line or shoulder darts to the top of the armhole. This keeps the armhole depth the same, so no change need be made in the sleeve top.

Alter front and back pattern pieces the same amount.



Shoulders of Pattern too Sloping

If your shoulders are square, the shoulder line of the pattern may slope too much. Check the shoulder height and armhole depth of the pattern with your own measurements (p. 11).

You will need to lengthen the armhole to make the dress fit well. Draw a line from the back armhole seam, about 1 inch down from the shoulder, to the point directly below the high point of the shoulder. Then draw a line from this point just to the shoulder edge, parallel to the center back (fig. 7, A). Cut on these lines almost to the shoulder edge. Raise

section *b* away from *a* to lengthen the armhole (fig. 7, *B*). Draw a new armhole line between sections *a* and *b*, cutting off the jog. Raise the front shoulder the same amount.

This alteration leaves the neck line unchanged. The sleeve cap will have to be lengthened about $\frac{1}{2}$ inch more than your shoulder seam was raised, to allow ease for setting the sleeve into the armhole. (See p. 31.)

If the pattern has a shoulder yoke, pin the yoke pattern to the blouse-back pattern, matching seam-allowance perforations, and check the measurements (fig. 8, *A*). To alter the pattern, draw a cutting line along the shoulder perforations (fig. 8, *A*). Cut along this line, then spread section *b* away from *a* as in figure 8, *B*.

Shoulders of Pattern too High

If your shoulders slope or your pattern calls for shoulder pads and you don't wish to use them, the shoulders of the pattern will be too square, and there will be extra material at the top of your shoulder.

You can fit out this extra material after the dress is basted, or you can alter the shoulders of the pattern.

When you alter the pattern, cut it as in figure 7, *A*, and lap section *b* over section *a* as in figure 7, *C*. This alteration makes the armhole smaller, and you may have to trim it out a little at the underarm after the dress is basted and fitted. Also the sleeve pattern may be too wide at the top for the altered armhole, so check the width of the cap (about halfway between top of sleeve and bottom of armhole) with that of a well-fitting sleeve. The sleeve cap is usually at least 1 inch wider than your arm. If necessary, you can narrow the sleeve cap of the pattern a little. (See p. 32.) Or you can remove any extra width in the sleeve cap when you set in your sleeve by taking a deeper seam allowance in the sleeve but not in the blouse.

To alter the shoulders of a pattern that has a yoke, cut the pattern as in figure 8, *A*, and lap section *b* over *a* as in figure 8, *C*.

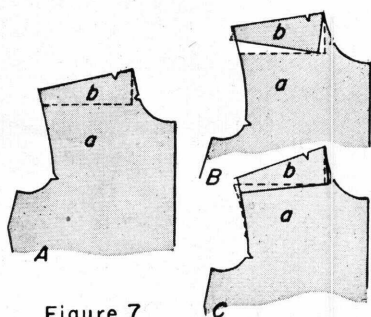


Figure 7

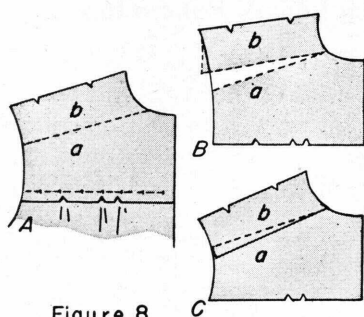


Figure 8

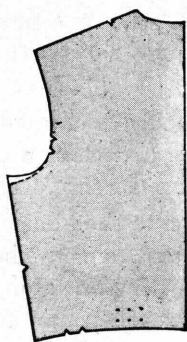


Figure 9

Armhole of Pattern too Low

When the armhole of the pattern is too low, the underarm seam has to be lengthened at the armhole to build up the armhole the needed amount. First, alter the blouse-back pattern. Lay a strip of paper under the armhole line and draw a higher armhole curve, using the back armhole line as a guide (fig. 9). Raise the front armhole the same amount, using the front pattern as a guide. If this makes the sleeve cap a little large for the armhole, alter the sleeve pattern (p. 32), or take a little deeper underarm seam in the sleeve (but not in the blouse) when the dress is basted. Sometimes the extra width, if it is small, can be eased into the armhole without being noticeable.

Pattern too Narrow Across Front at Neck Line

A neck that is rather large may strain the front of a dress just below the shoulders, so more width needs to be added to the pattern there. Measure your width across the front from armhole seam to armhole seam, at the level of the base of your neck. Compare with the pattern measurement at exactly the same point. Then add a piece to the pattern in the upper front so it corresponds to your measurements; taper off the added section to nothing at the waistline (fig. 10). This makes a new center-front line that must be placed on the straight of the material when you cut out the dress.

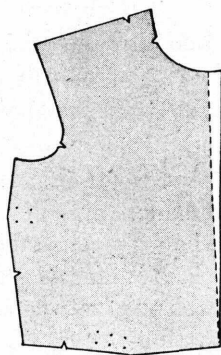


Figure 10

If there is a front facing, widen it the same amount. And if there is a collar, lengthen it to fit the new neck line. (See p. 38.)

Neck Line of Pattern too Large

If the neck line of your pattern is too large, pin or paste a strip of paper flat to the neck of the pattern in both front and back. Then draw a line, an even distance from the pattern edge, to make a smaller neck line. When you cut out the dress, mark the original seam line to use as a guide when fitting and finishing the neck. Make the facings smaller by the same amount, or shorten the collar to fit the new neck line (p. 38).

Shoulders and Chest of Pattern too Wide

Draw a line from a point on the shoulder seam, 3 inches from the top of the armhole to about $1\frac{1}{2}$ inches below the level of the bottom of the armhole. Make this line parallel to the center front. Then draw a line, at right angles to the first line, to the underarm edge (fig. 11, *A*). Cut along these lines almost to the underarm edge. Lap section *b* over section *a* until the shoulders and chest are as near your measurements as you can get them (fig. 11, *B*). Be careful not to change the bust measurement. Draw a new shoulder line from the neck to top of the armhole. (If the chest is still too wide when you fit your dress, you can trim off a little in the front of the armhole.) This alteration also takes out the bulge that often comes in front of the armhole.

If the back shoulder seam of the pattern is now more than $\frac{1}{2}$ inch longer than the front shoulder seam, you may need to narrow it just as you did the front. But if you are round-shouldered, you can probably work the extra fullness into back shoulder darts, or ease it onto the front shoulder when you make your dress.

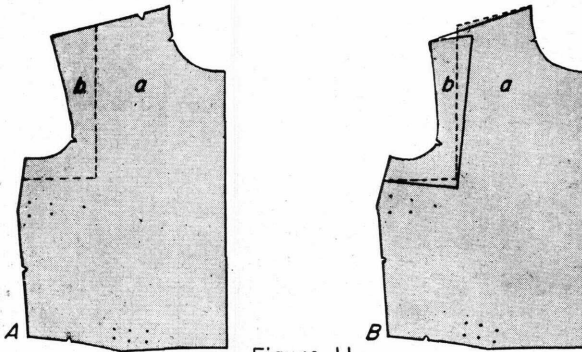


Figure 11

Bust of Pattern too Small

To enlarge the pattern at the bust, draw a line from the waistline, parallel to center front, to a point about 1 inch above the level of the bottom of the armhole. From this point draw a line at right angles to the first line, over to the armhole edge (fig. 12, *A*). Cut along these lines almost to the armhole edge. Spread section *b* away from section *a* until the bust measures the width you want (fig. 12, *B*). Draw in a new waistline, cutting off the jog. When you make the dress, take up any extra fullness at the waist in gathers, tucks, or darts; or if you do not want this extra fullness, trim off the extra material at the underarm seam below the bust level.

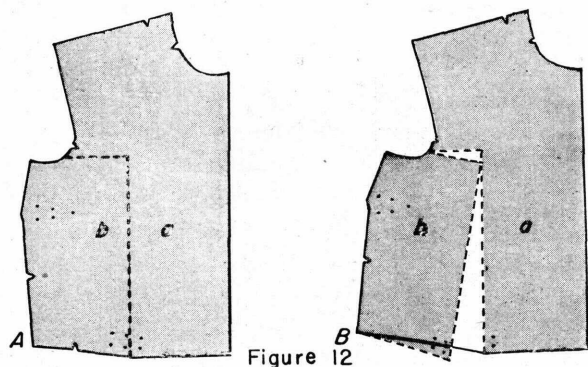


Figure 12

If the pattern has shoulder fullness, such as tucks or gathers, and is too small through the bust, draw a line from the middle of the shoulder, parallel to the center front, straight down to the waistline (fig. 13, A). Cut along this line. Spread section *b* away from *a*, from top to bottom, to widen the bust the amount needed (fig. 13, B). Make a new shoulder line and trim off the jog. Take up extra fullness at the shoulders in gathers or deeper tucks to fit the back shoulder seam. The surplus at the waistline can be worked into gathers or dart tucks.

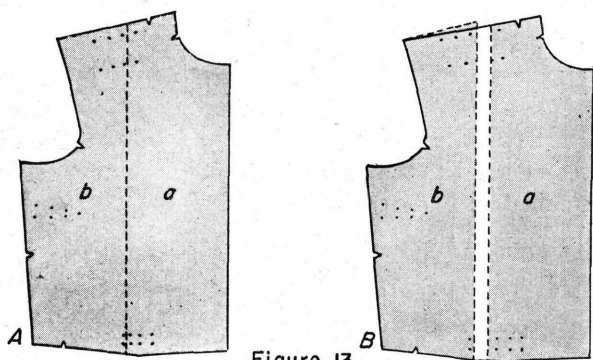


Figure 13

Bust and Chest of Pattern too Small

To widen the chest of your pattern as well as the bust, draw a line from waist to shoulder, parallel to the center front, about halfway between the center front and the side seam (fig. 14, A). Cut along this line, almost to the shoulder edge. Spread section *b* away from *a*, until the chest and bust are wide enough. Make a new shoulder line between the neck and armhole, filling in the hollow made by the alteration (fig. 14, B).

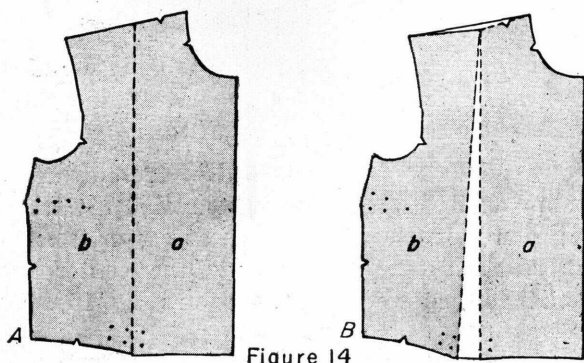


Figure 14

Bust of Pattern too Small; Chest and Shoulders too Wide

Draw a line on the pattern from shoulder seam to waistline. Over this line draw a crosswise line, for matching the pattern pieces after you have cut them apart. Draw another cutting line at right angles from the first line to the armhole edge, about $\frac{1}{2}$ inch above the bottom of the armhole (fig. 15, *A*). Cut from waistline to shoulder, then along the crosswise cutting line almost to the armhole edge. Lap section *b* over *a* until the chest and shoulder measurements are narrow enough. Then spread section *c* away from *a* to widen the bust (fig. 15, *B*).

Check the new bust measurement as shown in figure 15, *B*, not straight across from front to side. Section *c* now extends below *a*, so lengthen the front by making a new waistline from the bottom of *c* to the center-front edge. Use the lower edge of section *a* as a guide. If the underarm seam line slants too much, trim it off below the bust line as in figure 15, *B*.

If you have narrowed the front shoulder very much, you will probably have to narrow the back shoulders also. But be sure the back shoulder seam is at least $\frac{1}{2}$ inch longer than the front.

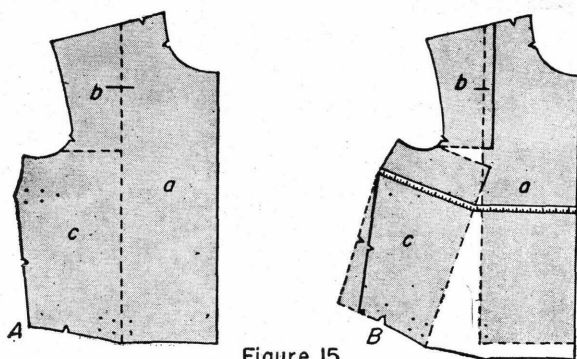


Figure 15

Waistline of Pattern too Small

If you have a large abdomen, you will probably find that the blouse pattern needs to be larger below the bust and around the waist. Also you may need more length in the blouse front than the pattern allows.

If the pattern needs to be just a little larger, draw a cutting line across the bust line, as in figure 16, *A*. Cut along this line almost to the underarm edge; then move section *b* down at center front until pattern is wide enough and long enough. Extend the center-front line from section *a* and join it to the lower edge of section *b* (fig. 16, *B*).

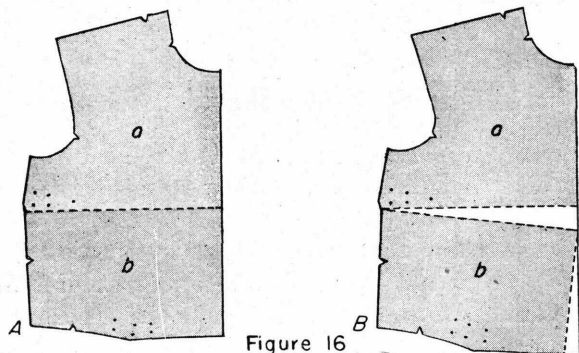


Figure 16

When the pattern is much too small, draw cutting lines as in figure 17, *A*. Cut along these lines. Spread section *b* away from *a* and *c* until the bust is wide enough. Then drop section *c* an even distance below *a* to lengthen the waist (fig. 17, *B*). Be sure to keep the center-front line straight.

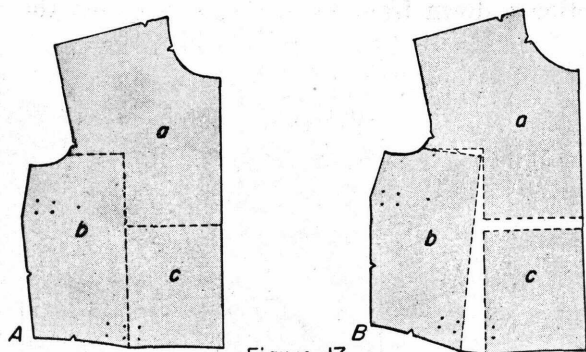


Figure 17

Front of Blouse Pattern too Short; Underarm Seam and Back too Long

If you have a large bust and are short-waisted, the blouse pattern may need to be lengthened in front but shortened at underarm and across the back.

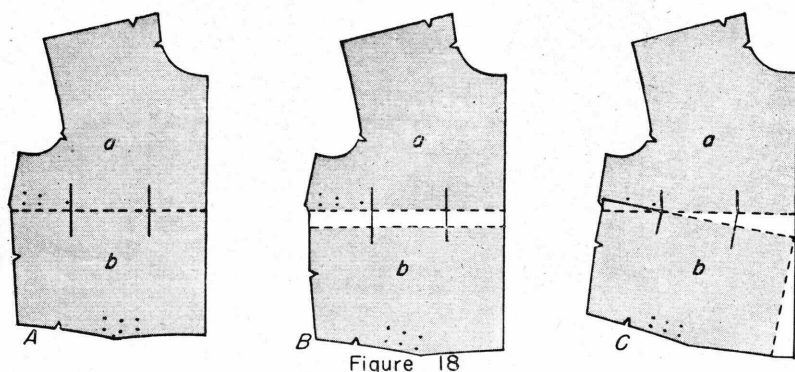
Draw a line just below the bust from front edge to underarm edge of pattern (fig. 18, *A*). Draw lengthwise lines for matching across the cutting line; then cut on the first line. Lower section *b* in the front, but at the underarm, lap section *b* over *a* until the underarm seam is as short as you want it (fig. 18, *C*). Be careful not to make it too short—if it is still a little long when the dress is fitted, any extra length can be trimmed off around the waistline. Extend the front edge of section *a*, and join it to the lower edge of section *b*.

Be sure to shorten the blouse-back pattern the same amount as you shortened the underarm seam in front. (See p. 13.)

Front of Blouse Pattern too Short

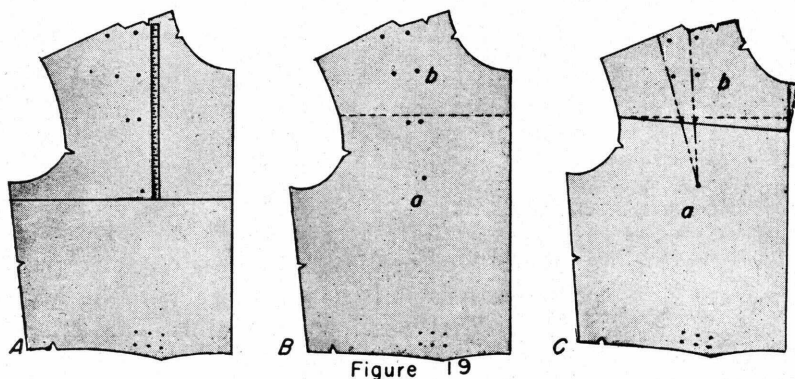
If you have a large bust in proportion to the rest of your figure, you may find that the blouse pattern is large enough across the bust, the right length at the underarm seam, but too short from shoulder to waistline. You will need to lengthen just the front.

To alter the pattern, it is best to lengthen the entire front blouse pattern and then take up the extra length at the underarm seam in an underarm dart when you put the dress together. Draw a cutting line from front edge to underarm edge just below the bust line. Draw lengthwise lines across the cutting line for matching (fig. 18, *A*). Cut the pattern; then move section *b* down from section *a* to lengthen the blouse front (fig. 18, *B*).

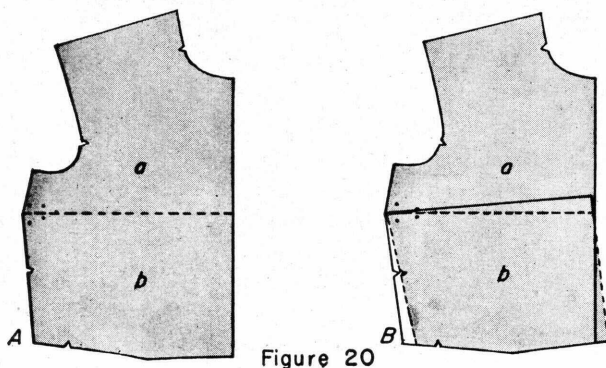


Front of Blouse Pattern too Long

If your pattern is too long from shoulder to waistline, check to see whether it is too long above or below the bust. If you have a flat chest and bust and are round-shouldered, the pattern may need to be shortened between shoulder and bust so your blouse won't sag there. Or if you are round-shouldered and have a low bust, your pattern may be too long between the bust and waist. Measure your pattern from the shoulder seam at neck line to the bust line (about 2 inches below bottom of armhole line). (See fig. 19, A.) Compare with the same measurement taken on yourself.



Pattern too long from shoulder to bust.—To shorten, draw a cutting line on the pattern about halfway between shoulder and bust line (fig. 19, B). Lap section *b* over *a* until the blouse is the right length. If the pattern has a shoulder dart, use the perforations in section *a* as a guide for marking a new dart; disregard dart perforations in section *b* (See fig. 19, C.) Extend the front edge of section *a* up to the neck line and cut off the jog.

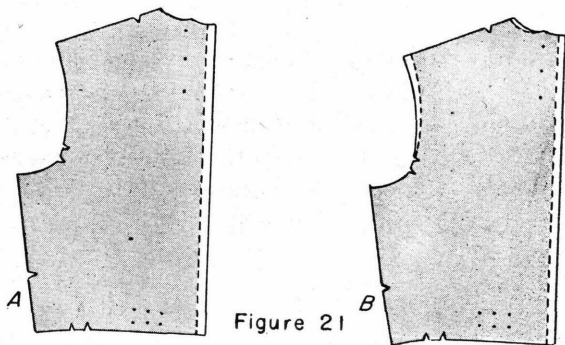


Pattern too long from bust to waistline.—To shorten, draw a crosswise line at bust line (fig. 20, *A*), and cut along this line. Lap section *b* over *a* to shorten the front (fig. 20, *B*). To keep the altered pattern the same size as the original one around the waist, extend the front edge of section *a* down to the bottom of section *b*, cutting off the corner, and extend the underarm line of section *a* down to the waistline.

Since alterations of this type are hard to detect by measuring, it is wise to make a plain shirtwaist dress of muslin, alter it to fit, and use as a guide in changing other patterns.

Blouse Pattern too Narrow Across Back of Neck

If a dress is too narrow across the back of the neck, diagonal wrinkles may form in the front from the neck to the underarm. If you have this trouble with dresses, be sure to check carefully the back neck-seam measurement of your pattern and the upper back width. (See p. 11.) The neck seam on the pattern should be not more than $\frac{1}{2}$ inch smaller than your neck measurement. If it is, add the needed amount to center back (fig. 21, *A*). Or if there is much difference in the measurements, it may be better to add half the amount to the center back and the rest to the upper part of the armhole line. Taper this off to nothing at the bottom of the armhole curve (fig. 21, *B*).



Back of Blouse Pattern too Wide

If you have made the shoulders narrower in the front, you may have to narrow the back-blouse pattern from top to bottom. Draw a cutting line as in figure 22, *A*. Cut along this line, separating section *a* from *b*. Then lap section *b* over *a* the same amount from top to bottom until the back is narrow enough. Make a new shoulder line from neck to top of armhole (fig. 22, *B*).

Back of Blouse Pattern too Wide Below Armholes

If your back width is small in proportion to your bust, you may have to enlarge the pattern in the front and make it smaller across the back to keep the side seams in the right position. Compare your back measurement at bust level with that of the pattern (p. 11). If the pattern is too wide below the armhole but fits at the shoulder, draw a cutting line from about the middle of shoulder seam to waistline (fig. 22, *A*). Cut along this line from waistline almost to shoulder edge. Lap section *b* over *a* until the back is narrow enough below the armhole (fig. 22, *C*). Check the upper back measurements to be sure the pattern hasn't been made too narrow there.

Back of Blouse Pattern too Narrow Below Armholes

Some patterns are styled with fitted backs that are uncomfortably tight below the armholes. Compare your back measurement at bust level with that of the pattern (p. 11). If more width is needed, draw a line from the waistline to about the middle of the shoulder seam (fig. 22, *A*). Cut along this line, almost to the shoulder edge. Move section *b* away from *a* until the back, just below the armhole, is the width you need (fig. 22, *D*). The extra material at the waistline can be laid in small pleats or darts when the dress is made.

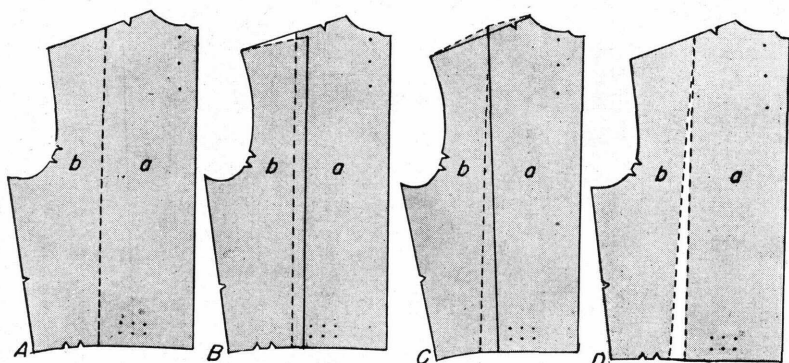


Figure 22

Back of Blouse Pattern too Narrow at Armholes

If you have a large muscle just back of your arm, the pattern may be too small across the back. Check the measurements for width across shoulder blades (p. 11). To widen the pattern there, draw a cutting line from a point on the shoulder about 2 inches in from the top of the armhole to a point about 2 inches below the level of the bottom of the armhole (fig. 23, *A*). Cut along this line. Then spread section *b* away from *a* to

widen the back (fig. 23, *B*). This makes a longer shoulder line, but the extra material can be eased onto the front shoulder seam or taken up in a shoulder dart. Make a new shoulder line from neck to top of armhole.

Another way to enlarge the pattern is to draw a new armhole line, taking out the deep back curve as in figure 23, *C*. In both cases, it would be wise to add extra width to the back of the sleeve cap, as in figure 23, *D*.

A dress with gathers or pleats set in below a shallow back shoulder yoke is good for this type of figure, since it has more fullness than could possibly be added to a plain back.

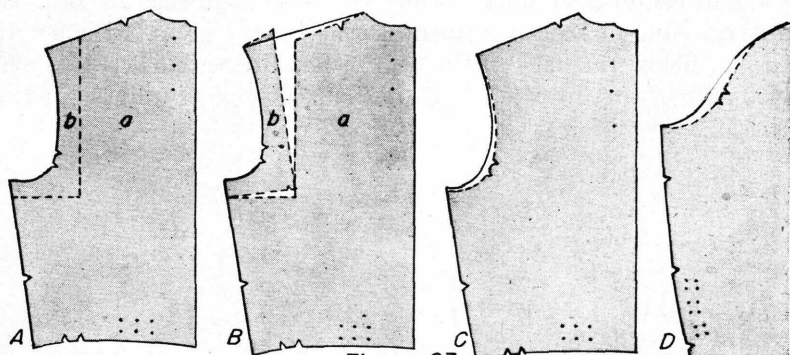


Figure 23

Center Back of Blouse Pattern too Long

The blouse of a pattern may be too long in the back but not at the underarm seam for the very erect figure or one with a large bust or sway-back. Compare pattern measurements for blouse length at center back and over shoulder blades with your own measurements. (See p. 11.)

To shorten the back, draw a crosswise line from the center back to the underarm edge of pattern about 1 inch below the bottom of the armhole (fig. 24, *A*). Cut along this line almost to the underarm edge. Lap section *b* over *a* to shorten the center back (fig. 24, *B*). Extend

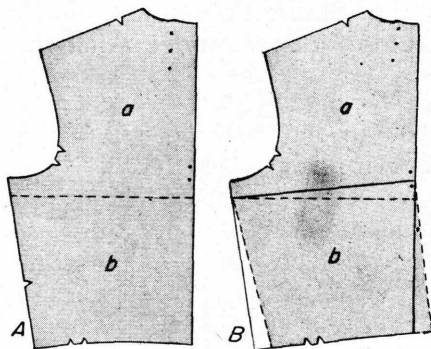


Figure 24

the original center-back line from section *a* to the waistline and trim off the jog. Extend the underarm seam of section *a* to waistline.

Pattern too Small Across Back of Neck and Upper Back

If you have a pad of fat at the back of your neck, your pattern will need to be lengthened and widened there. Check measurements for back neck width, upper back width, and length at center back of blouse (p. 11). One way to widen the back is to leave unstitched any tucks at the back of the dress neck, but a better way is to alter the pattern. Draw a line from center back to armhole line, about 1 inch below the top of the armhole (fig. 25, *A*). Cut along this line, almost to the armhole edge. Raise section *a* at center back until pattern is long enough (fig. 25, *B*). Extend center-back line of section *b* to neck line. This gives extra length and width just below the back of the neck, where it is needed. If the neck is too wide when the dress is fitted, take up any extra fullness in tucks or shirring.

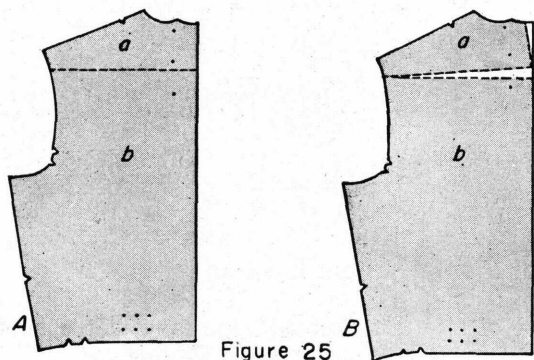


Figure 25

Back of Blouse Pattern too Short and too Narrow Above Armholes

You may need more length and width in the upper back of the pattern if you are round-shouldered. Check the blouse length and the width at shoulder blades (p. 11).

To alter the pattern, draw a cutting line from center back to armhole line about 2 inches above the bottom of the armhole (fig. 26, *A*). Cut along this line almost to the armhole edge. Raise section *a* at center back until the pattern is long enough from the middle of the shoulder to the waistline (fig. 26, *B*). Extend center-back line of section *b* to neck line. Draw in a new neck line at the higher neck level, using the original neck pattern as a guide. Make a new shoulder line from the neck line to the top of armhole. This makes the back shoulder longer, but it can be eased onto the front shoulder or the fullness taken up in shoulder darts.

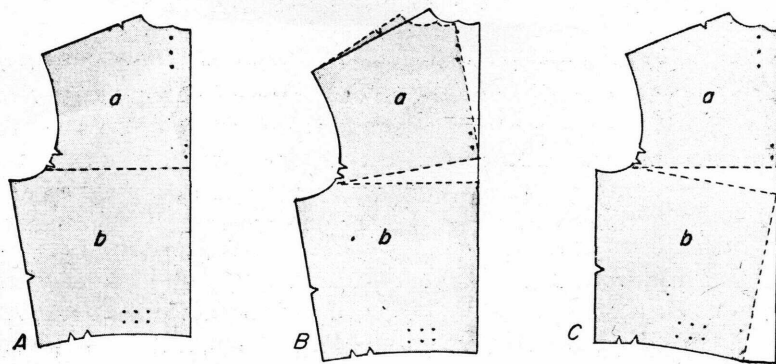


Figure 26

Back of Blouse Pattern too Short and too Narrow Below Armholes

When your back is large below the armholes, you may need to add extra length and width to the back-blouse pattern between bottom of armhole and waistline. Check length and back measurement at bust level. Cut the pattern as for alteration above (fig. 26, A). Then lower section *b* to lengthen blouse at center back. Extend the center-back line from section *a* straight down to the waistline (fig. 26, C). Use the under-arm section just as it is to widen the lower back. Take up extra fullness at waistline with laid-in pleats or tucks when you put the dress together.

Back Armhole of Pattern too Short

If you have trouble with your dress sliding back on your shoulders, the back of your blouse is probably too short from shoulder to bottom of armhole. Check the armhole depth (p. 11). To lengthen the armhole, draw a crosswise line from center back to armhole, with short lengthwise lines for matching (fig. 27, A). Cut along the crosswise line. Lower

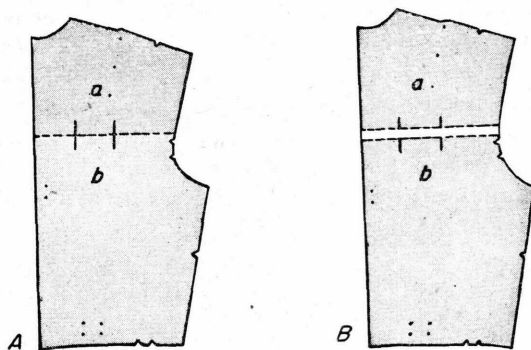
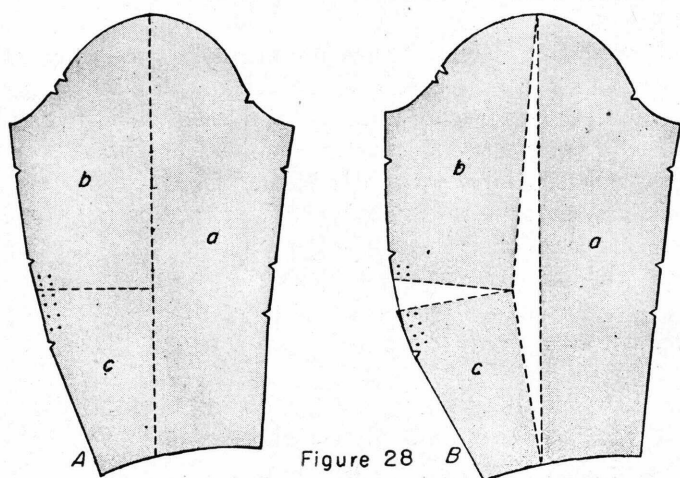


Figure 27

section *b* until the armhole depth corresponds to your own measurement (fig. 27, *B*). Check the sleeve-cap length; you may have to lengthen it the same amount. (See p. 31.) If this alteration makes the back of your blouse too long, shorten it below the armhole. (See p. 13.)

Pattern too Small at Elbow

If your elbow is large, you may have to widen the pattern at the elbow and a little above and below it. Draw a cutting line from the top-of-shoulder perforations to the bottom of the sleeve, parallel to the straight-of-goods marks. Then at elbow level, draw another line at right angles to the first (fig. 28, *A*). Cut along the crosswise line, then along the lengthwise line almost to top and bottom edges of sleeve. Spread sections *b* and *c* apart as in figure 28, *B*, until the elbow measurement allows at least an inch for fullness. Draw in a good elbow curve, as in the original pattern.



Pattern too Small Below Elbow

If the pattern is too small below the elbow, you'll need to add extra width at the elbow as well as below it. Draw a crosswise line just above the elbow level to center of sleeve and another from this point to lower edge (fig. 29, *A*). Cut along these lines, but just to the lower edge of pattern. Spread section *b* away from *a* until the measurements at elbow and fullest part of lower arm allow at least 1 inch for ease. Draw in a good elbow curve, as in original pattern (fig. 29, *B*).

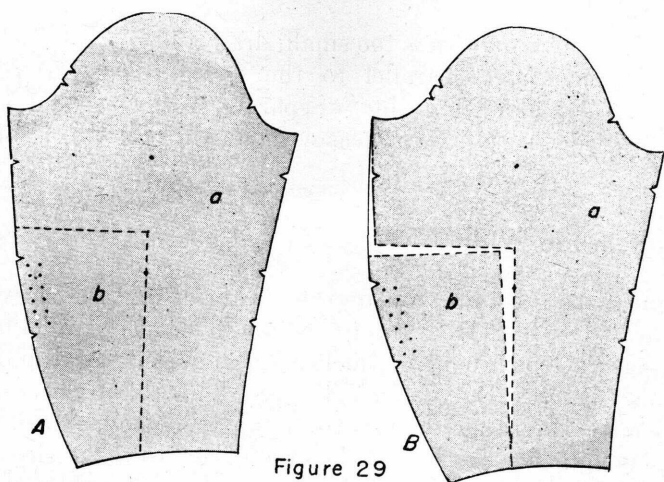


Figure 29

Pattern too Small Above Elbow

If your upper arm is large, it is best to choose a loosely styled sleeve, though even patterns for loose styles sometimes have to be widened. To alter, draw a crosswise line just above the elbow and another line, parallel to the straight-of-goods marks, from the top-of-shoulder marks to the crosswise line (fig. 30, A). Cut down to the crosswise line, then across almost to each edge. Spread sections *a* and *b* apart (fig. 30, B) until the sleeve width at cap and upper arm provides enough ease.

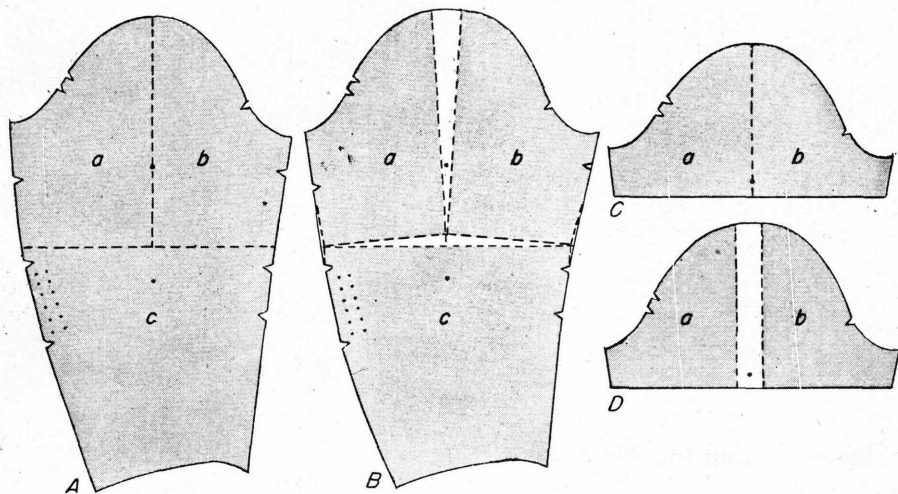


Figure 30

If a short sleeve pattern is too small, draw a line from top-of-shoulder marks to bottom edge, parallel to the straight-of-goods perforations (fig. 30, *C*). Cut along this line. Separate sections *a* and *b* until the pattern is as wide as your own measurement plus allowance for ease (fig. 30, *D*).

Sleeve Pattern too Wide

If your arms are thin, you may have to narrow the sleeve pattern. To alter, draw two lines from top to bottom of sleeve, parallel to straight-of-goods perforations, about $1\frac{1}{2}$ inches on each side of top-of-shoulder perforations (fig. 31, *A*). Cut along these lines. Lap sections *b* and *c* over section *a*—the same amount from top to bottom—until the sleeve is narrow enough (fig. 31, *B*), but be careful not to make sleeve too narrow. The armhole seam of a plain-topped sleeve should usually be $1\frac{1}{2}$ to 2 inches larger than the armhole of the blouse. Draw in a new top-of-sleeve line.

If the wrist measurement of the pattern is right but the pattern is too wide at elbow and above, cut almost to the bottom edge of the pattern. Then lap sections *b* and *c* over section *a* (fig. 31, *C*).

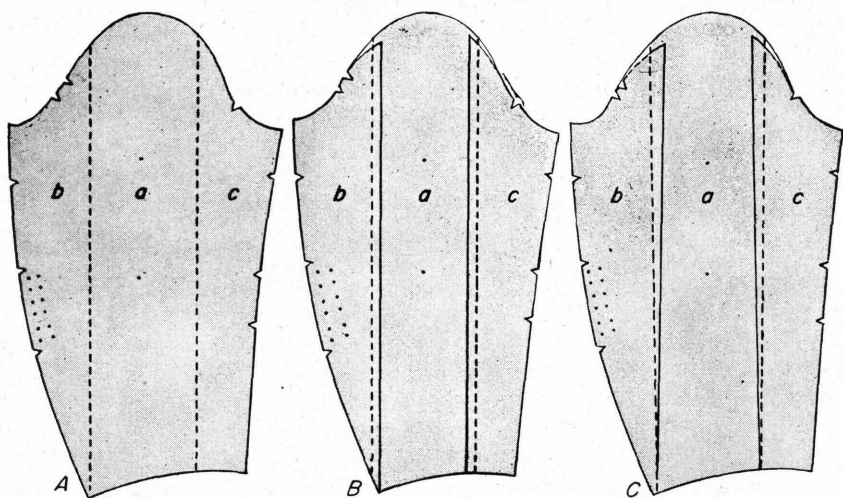


Figure 31

Sleeve Pattern too Narrow

To widen the sleeve pattern from top to bottom, draw a line from top-of-shoulder marks to bottom edge, parallel to the straight-of-goods perforations (fig. 32, *A*). Cut along this line. Spread sections *a* and *b* an equal distance apart from top to bottom.

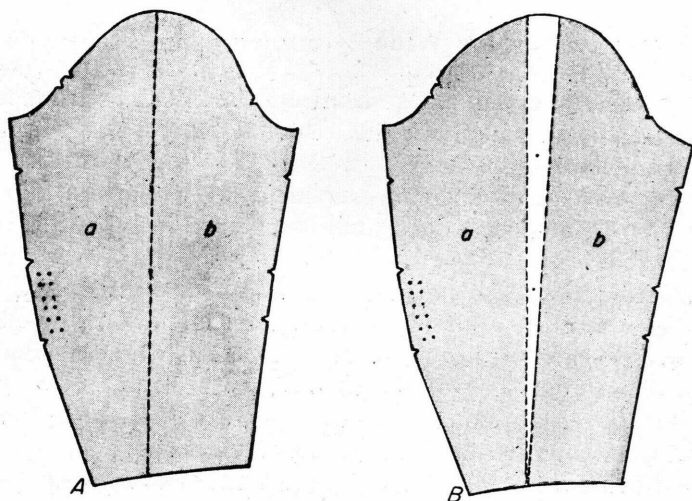


Figure 32

If the wrist measurement of the pattern is right but the pattern is too narrow above, cut just to the bottom edge of the pattern. Spread sections *a* and *b* apart the same amount. Then make new top-of-shoulder marks and straight-of-goods marks in the center of the slash (fig. 32, *B*).

Cap of Sleeve Pattern too Short or too Long.

When the sleeve cap is too short, wrinkles form from the underarm seam to the top of the sleeve. To lengthen the sleeve cap, draw a line across the top of the pattern at right angles to the straight-of-goods marks (fig. 33, *A*). Draw lines for matching, and cut. Raise section *a* (fig. 33, *B*)—until the sleeve cap is about $\frac{1}{2}$ inch longer than your own measurement, to allow plenty of ease for setting in the sleeve. (If the sleeve cap is a little too long when the sleeves are basted in the dress, fit out the extra length by taking a deeper seam in sleeve cap than in armhole of blouse.) Smooth the sleeve-cap edge of pattern by extending outside edges of section *b* to *a*.

If the sleeve cap is too long, shorten it by lapping section *b* over *a*.

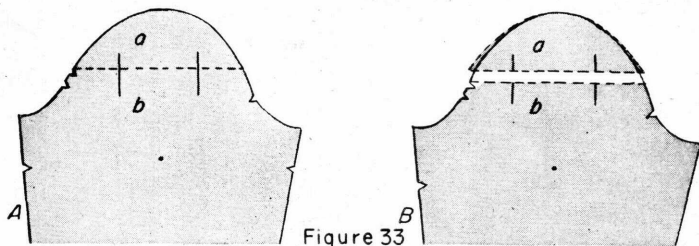
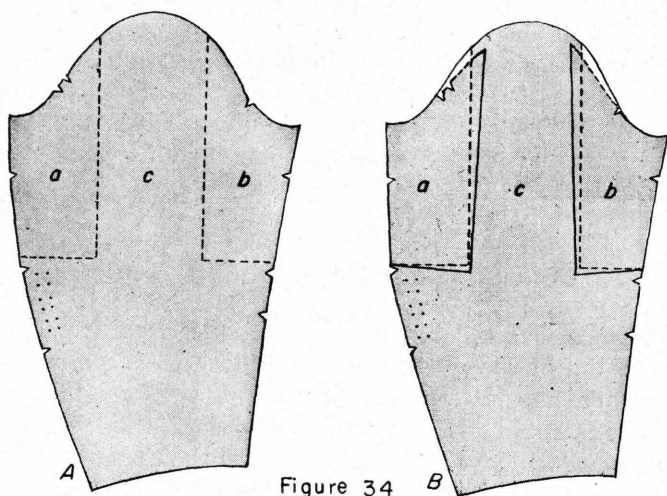


Figure 33

Cap of Sleeve Pattern too Wide

If the armhole of the blouse front and back has been made smaller, the sleeve cap may be too large. Measure across your arm from armhole seam to armhole seam, halfway between top of sleeve and bottom of armhole. Compare with the same measurement on the pattern. The pattern of a sleeve with shoulder pads should be about 2 inches larger than your arm to allow for ease.

To narrow the sleeve cap, draw cutting lines on the pattern at each side of sleeve from the armhole to an inch or more above the elbow; then straight over to each edge at right angles to the first line (fig. 34, A). Cut along these lines, but just to the edge at the underarm seam line. Lap sections *a* and *b* over section *c* until the sleeve-cap width is right (fig. 34, B). Draw in a good curve around the armhole. Narrowing the sleeve cap on both sides, rather than in the center, keeps the sleeve well-shaped.



Long-Sleeve Pattern With No Elbow Fullness

Long sleeves generally need elbow fullness for comfort and to prevent strain on seams. To add extra fullness for a dart or gathers at the elbow, you need to lengthen the back seam line of the pattern. Draw a line straight across the pattern at elbow level (fig. 35, A), and cut along this line almost to the front edge. Without moving the top of the sleeve, lower section *b* so there is at least a 1-inch space between the two sections at the back seam line (fig. 35, B). Draw in a new elbow line. When you make your dress, work this fullness into one or more unpressed pleats, or ease it into gathers on each side of the elbow.

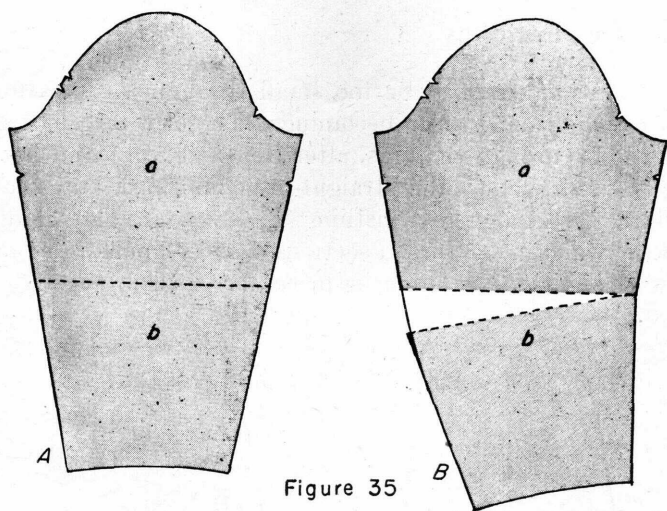


Figure 35

Skirt Pattern too Large

If you've bought a pattern to fit your bust and your hips are small in proportion, you will have to make the skirt smaller. The best way is to take an equal amount from each seam, until the hip measure is about 2 inches larger than your own measurement (fig. 36).

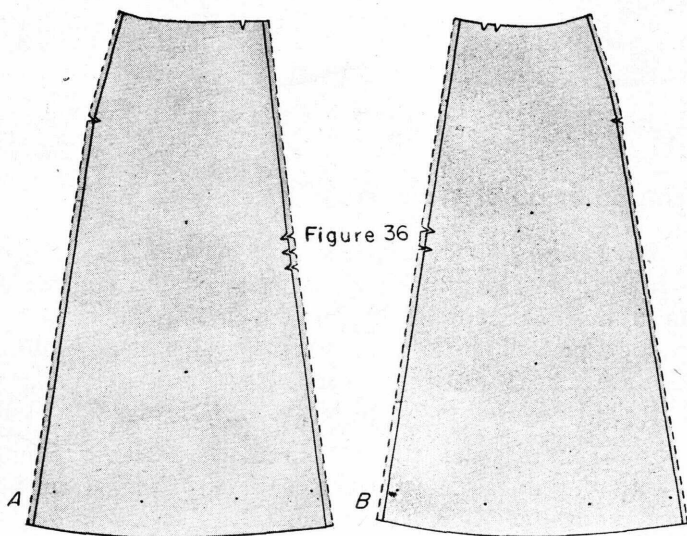


Figure 36

Pattern too Small at Hips

Your skirt pattern may be too small through the hips for comfort, or the style too straight to be becoming. To get a nice flare in the skirt and more width through the hips, alter the skirt front and back. Draw a cutting line parallel to the straight-of-goods marks up the center of pattern from lower edge to waistline (fig. 37, *A*). Cut along this line almost to the waistline. Spread sections *a* and *b* apart an equal amount. Make new straight-of-goods marks in center of slash (fig. 37, *B*).

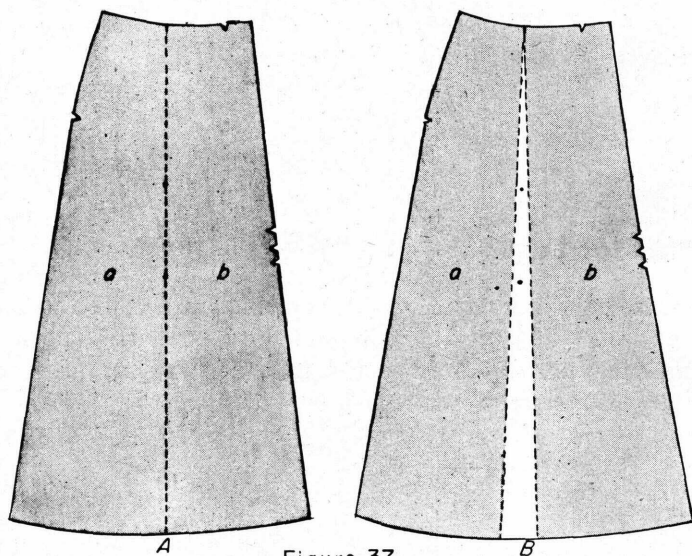


Figure 37

Skirt Pattern too Small at Waist Front

If you have a large abdomen, the skirt pattern may be too small across the front. One way to alter the pattern is to widen each front skirt section from waistline to hem. Draw a cutting line up the center of each front skirt piece from hem to waist parallel to straight-of-goods marks (fig. 38, *A* and *B*). Cut, and spread sections *a* and *b* apart evenly. Make new straight-of-goods marks in center of slash (fig. 38, *C* and *D*).

Another way is to widen the skirt from the waist to about 8 or 10 inches below the hip line. Draw a line, parallel to the straight-of-goods marks, down the center of each skirt front piece to about 7 or 8 inches below the hip line. Then draw a crosswise line at right angles to the

first (fig. 39, *A* and *B*). Cut along the lengthwise line, then along the crosswise line almost to the pattern edges. On the center piece, move *a* away from *b* (fig. 39, *C*) and on the side piece, spread sections *a* and *b* apart (fig. 39, *D*) until the waist and hip measurements are right. Connect waistline edges of *a* and *b*; straighten seam lines from waist to hem.

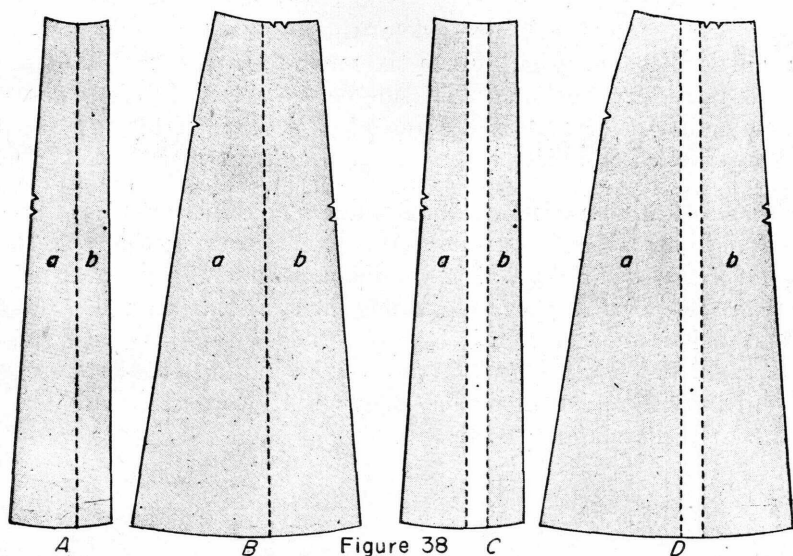


Figure 38

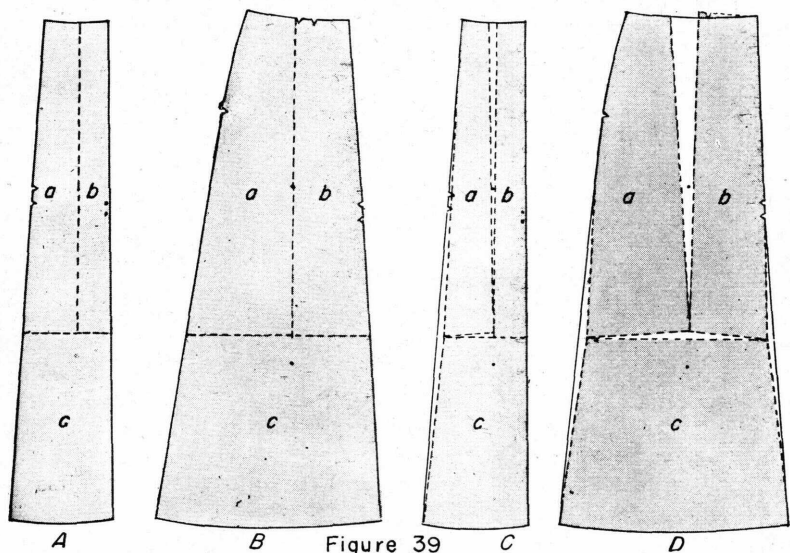


Figure 39

Skirt Pattern too Short on One Side

If one hip is much larger than the other, your skirt seams will swing to the larger side, particularly if the skirt is rather tight. This is most noticeable if the skirt has pleated front sections. Choose instead, gored skirts with a little flare, if you have this difficulty.

However, if you make one side of the pattern longer than the other, your skirt will hang right. For a six-gored skirt, you will have to alter one side-front and the matching side-back pattern piece, and perhaps half the center-front and the center-back pieces. If the skirt has four gores, alter one front piece and the matching back piece.

To alter, draw a crosswise line about 5 or 6 inches below the waistline, as in figure 40, *A*. Cut along this line. Raise section *a* at the side seam until the skirt length at the side is the same as your own measurement (fig. 40, *B*). If you have to lengthen the side seam of a six-gored skirt an inch or more, also raise section *a* at the side-front and side-back seams slightly. Then lengthen the side-front and side-back seams of the center-front and center-back pieces until the seams are the same length as the matching ones (fig. 40, *C*).

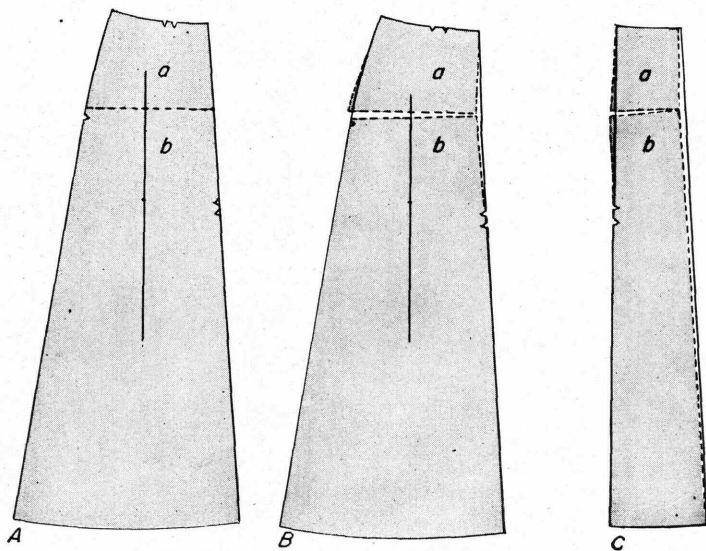


Figure 40

Skirt Pattern too Short and Narrow at Bottom

If you are tall, you'll need to lengthen the skirt pattern and at the same time you may also want a little extra width around the bottom to give a nice flare. Add the length to the bottom of the pattern rather than just below the hips. Pin or paste a strip of paper to the bottom edge; then mark the needed amount evenly around the lower edge, using the bottom of skirt as a guide. Extend the seam lines (fig. 41).

Skirt Pattern too Straight at Sides

Side seams of some skirts hang straight, with little flare, from hips to hem line. If a flared skirt is more becoming, you can add a flare to the pattern. Pin or paste a strip of paper to the side seam line of pattern. Then draw a line from the widest part of the hip curve down to the hem line, adding a little more width to the bottom of the skirt (fig. 42). Change both front and back side seams the same amount.

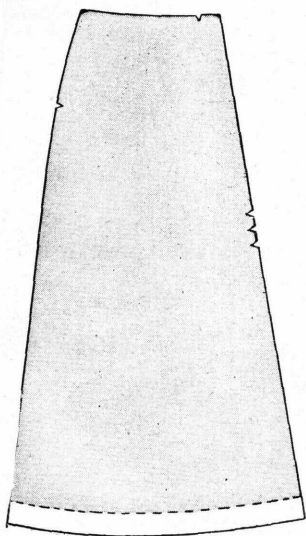


Figure 41

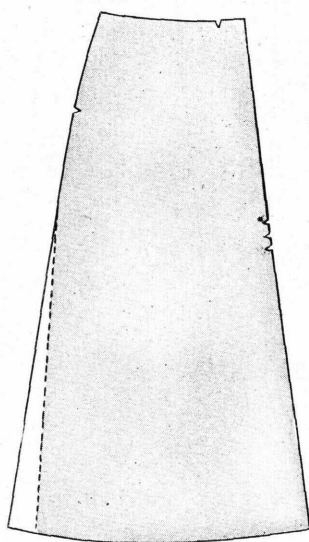


Figure 42

Skirt Pattern too Short in Back

If your skirts draw up in back, the back skirt sections probably need more length from hip line to hem. Figure 43 shows how to alter a six-gored skirt. On each back-skirt section, draw a crosswise line at hip level, at right angles to the straight-of-goods marks (fig. 43, *A* and *B*). Cut along these lines. Drop section *b* at center back, enough to make the skirt hang evenly (fig. 43, *C*). Then lower the side-back seam line of the side-back-pattern piece the same amount (fig. 43, *D*). Make new side and side-back seam lines by extending these lines on section *a* to the hem line (fig. 43, *D*). Make a new bottom curve between the new side and side-back seams. This alteration supplies the needed length in the back and adds a little extra width at the bottom.

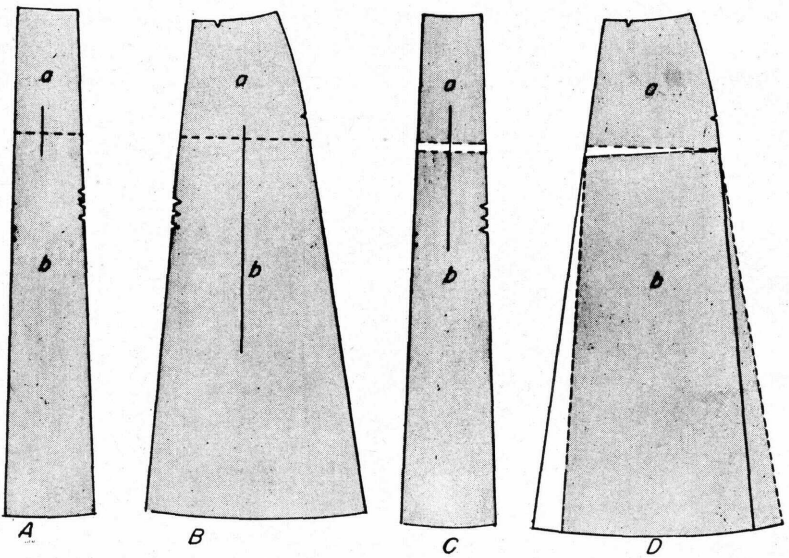


Figure 43

Collar Pattern too Short or too Long

If you have enlarged the neck line of your pattern, you will have to change the collar the same amount. Cut out a trial collar in muslin and try it on your dress. If you have widened the back neck line of the dress, you can lengthen a straight collar between the shoulder-seam perforations and the center back by adding a piece to the center-back edge of pattern (fig. 44, *B*). If the neck line has been enlarged across the front, add the extra length to the front edge of pattern (fig. 44, *C*).

If the collar is one that lies flat and the neck line has been enlarged at the back, slash the collar halfway between the center-back and shoulder-seam marks (fig. 45, *A*). Spread the pieces apart the needed amount (fig. 45, *B*). If the dress neck line has been widened in front, slash the collar between shoulder and front edge, and spread the pieces apart the needed amount (fig. 45, *C*). Or if the neck alteration has been slight, take a smaller seam on the front edge of collar.

To make the collar shorter, lap the collar sections instead of spreading them apart.

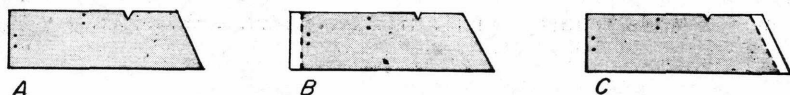


Figure 44

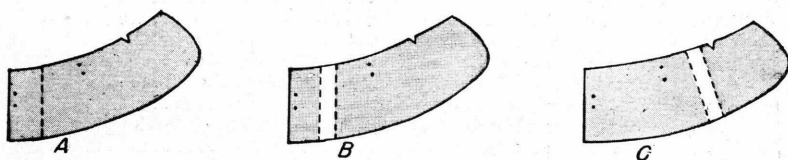


Figure 45

Collar Pattern too Long Around Outer Edge

Try out the collar pattern in muslin. If the collar pokes out in the back, pin a fold in the center back of the muslin; or cut it in a few places from the outer edge almost to the neck edge (fig. 46, *A*). Lap the edges to make the collar smaller at the outer edge (fig. 46, *B*). When the collar is altered to the right size, make a new paper pattern.

Collar Pattern too Short Around Outer Edge

If your trial muslin collar rolls too high on your neck and you want it to lie flat, you'll need to add more neck curve and more length around the outside edge. Add more width to the outer edge by slashing the muslin as in figure 46, *A*, and spreading the sections apart until the collar is as curved as you want it (fig. 46, *C*).

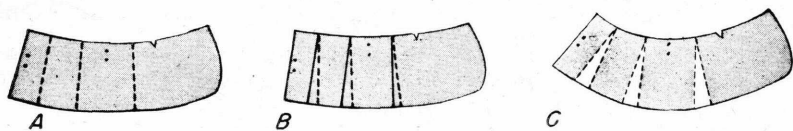


Figure 46

CONTENTS

	Page
Know your measurements.....	2
Measurements needed to check the pattern.....	4
Buy the right size pattern.....	6
Measure the pattern pieces.....	6
Does the pattern need to be altered?.....	11
How to alter patterns.....	12
A basic pattern saves time in altering.....	13
Pattern too short or too long.....	13
Shoulders of pattern too wide or too narrow.....	14
Shoulders of pattern too sloping.....	14
Shoulders of pattern too high.....	15
Armhole of pattern too low.....	16
Pattern too narrow across front at neck line.....	16
Neck line of pattern too large.....	16
Shoulders and chest of pattern too wide.....	17
Bust of pattern too small.....	17
Bust and chest of pattern too small.....	18
Bust of pattern too small, chest and shoulders too wide.....	19
Waistline of pattern too small.....	20
Front of blouse pattern too short; underarm seam and back too long..	21
Front of blouse pattern too short.....	21
Front of blouse pattern too long.....	22
Blouse pattern too narrow across back of neck.....	23
Back of blouse pattern too wide.....	23
Back of blouse pattern too wide below armholes.....	24
Back of blouse pattern too narrow below armholes.....	24
Back of blouse pattern too narrow at armholes.....	24
Center back of blouse pattern too long.....	25
Pattern too small across back of neck and upper back.....	26
Back of blouse pattern too short and too narrow above armholes...	26
Back of blouse pattern too short and too narrow below armholes ..	27
Back armhole of pattern too short.....	27
Pattern too small at elbow.....	28
Pattern too small below elbow.....	28
Pattern too small above elbow.....	29
Sleeve pattern too wide.....	30
Sleeve pattern too narrow.....	30
Cap of sleeve pattern too short or too long.....	31
Cap of sleeve pattern too wide.....	32
Long-sleeve pattern with no elbow fullness.....	32
Skirt pattern too large.....	33
Pattern too small at hips.....	34
Skirt pattern too small at waist front.....	34
Skirt pattern too short on one side.....	36
Skirt pattern too short and narrow at bottom.....	37
Skirt pattern too straight at sides.....	37
Skirt pattern too short in back.....	38
Collar pattern too short or too long.....	38
Collar pattern too long around outer edge.....	39
Collar pattern too short around outer edge.....	39

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